#VaughanDigital

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City of Vaughan **Digital Strategy 2.0**

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Making Vaughan Better For People
In Our Digital Age.

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1.0 Introduction

1.1 What is Digital?

As you get ready for your day, do you check your favourite news app to see what's been happening in the world? Do you look at Facebook, Twitter or Instagram over breakfast? Do you check the traffic conditions on Google Maps or Waze before your first appointment? In the evening, do you watch a YouTube video, maybe yourself or with the kids or the grandchildren? Are you up to date with your favourite shows on Netflix? Have you bought something online in the last month? How often today do you 'Google that'?

If you do any of these things, you are already familiar with digital products and services. Simple, convenient, and often fun to use - many of us have become reliant on a whole raft of digital services.

In this new digital age, an emerging set of industrial Internet titans such as Google, Amazon, Facebook, and Netflix along with thousands of smaller, but significant players have mastered digital. Their mastery has begun to have a significant impact upon society, the

way we interact and the way we live our lives. These firms have developed techniques and approaches that are demonstrably successful in the digital age. The hallmarks of which are:

• A mobile and web first approach that builds services around customer needs and preferences

• Automated self service, reducing and in some cases eliminating the need to interact in person

• Scalable services that can grow as demand grows without adding more staff

• Data driven decisions about service design and iterative improvements based on what has been tested and proven to work

• Experimentation with new ideas, constantly testing, iterating and improving

• New ways of thinking about old problems that eschew traditional modes of service delivery and take a radical new look at what the most effective way to do something today is

Of course, private industry is now working hard to keep up and compete with these digital leaders. Airlines, banks, insurance companies and the retail sector have applied similar techniques to these Internet leaders and as a result are delivering services that offer high quality experiences; allowing customers to pay bills while watching their kids play hockey, buy furniture on the subway, or book a trip between meetings.

Nothing stands still. Digital Technologies are evolving faster than ever with the emergence of new technologies that are expected to have significant impact on municipal government. Specific examples include connected devices and sensors as part of the Internet of Things (IoT) allowing the City to monitor traffic and water flows, air quality and noise, increasing sophistication and use of Augmented and Virtual Reality (AR and VR) for visualization of development proposals for example, the use of Artificial Intelligence (AI) to answer customer service inquiries, and the growth of voice as a new interface to technology with Siri, Google Assistant, Alexa and Cortana.

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A New Way to Buy Eye Glasses

Warby Parker is new kind of online service to buy glasses online. Customers use their usual optician to provide their prescription (the company recently announced an enhancement to their app which will conduct a vision test), and that's where the usual process stops. Now, you take a picture of your prescription with your smartphone or tablet, and upload it to Warby Parker's app. You use your camera to take a picture of your face. Their software and back-office staff calculate your facial measurements to make sure your new glasses will fit. You pick the glasses you like and 1 week later you get the glasses in the mail. If you don't like them - you can send them back. Warby Parker doesn't need premises, they don't need staff running stores, all of which saves them money. And they pass those savings onto their customers - so the glasses cost about ½ of what they may do in a regular store. Not everyone wants to use services in this way. Some people want the personal touch, to browse the shelves. But many people do, and Warby Parker provides an option for those people.

**Imagine how government could embrace some of the ideas illustrated by this example.**

1.2 Digital's Impact on Government

Increasingly customers expect government in the digital age to offer services that are on par with those offered by Google, Air Canada or CIBC. Quite simply, customers expect government in the digital age to be better, faster and easier to interact with.

Many governments are now using these same digital approaches and techniques developed by Internet service firms and private industry to optimize their own services and service delivery. Of course, government services are different and more nuanced than online retail, but government teams are rethinking government from the perspective of 'if Amazon, Google, or Facebook were designing it.'

To tackle this challenge the UK government established the Government Digital Service (GDS)[1]. The GDS is a government agency responsible for digital transformation of government. They are a centre of excellence in digital, technology and data, collaborating with departments to help them with their own transformation.

The UK's GDS has been a trailblazing, standards setting organization, which other governments have modeled their own digital services after. The USA has established a similar organization called 18F[2]. The Canadian government launched the Canadian Digital Service in July 2017. Australia and others have also followed suit.
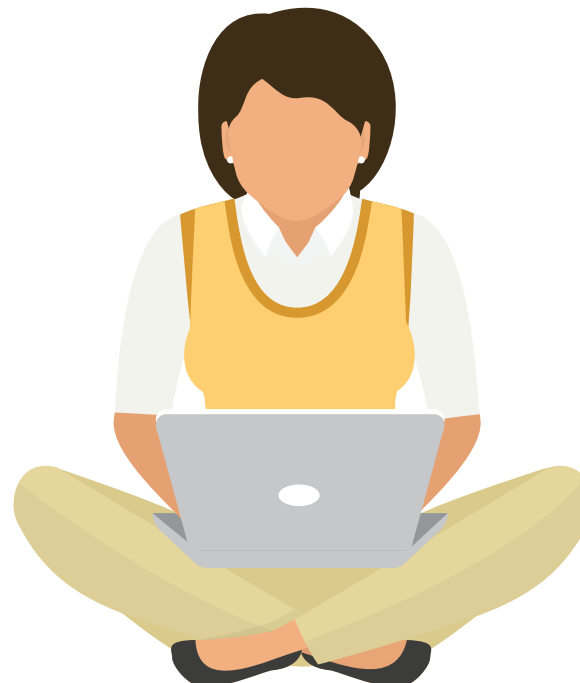
At the provincial level, the Province of Ontario has established its own Digital Team[3]. Indeed you may have experienced yourself the impacts of their digital program. Gone are the long waits for license plate sticker renewals at a ServiceOntario office. Now, you can purchase a sticker online and it's mailed to you. This is a great example of Digital at work - more convenient, and less time consuming for the customer, more environment friendly, and significantly more cost effective for the Province. A win-win.

Larger municipalities, such as Vancouver, Boston, Philadelphia and Chicago, have built Digital teams also modeled after leading examples at the Federal level to spearhead their own Digital efforts.
So what should the City of Vaughan's services look like in the digital age, and how should the City position itself to take advantage of the digital opportunity? This is what this digital strategy aims to address.

1 https://gds.blog.gov.uk/about/
2 https://18f.gsa.gov/
3 https://www.ontario.ca/page/digital-government

1.3 Why is a Digital Strategy important for Vaughan?

The most recent information available from Statistics Canada for Internet penetration in Ontario is from 2013. At that time 84% of households in Ontario had access to Internet. It is reasonable to assume in 2017 that this number is higher in general, and perhaps higher overall in Vaughan due to the relative affluence of the City (Media Technology Monitor survey results suggest it is around 90%[4]).

In addition to home based Internet, according to the CRTC over 73% of Canadians had a smartphone in 2015[5]. According to a Media Technology Monitor report in 2016 "74 per cent of people aged 65 and older were using the Internet regularly".

The City also offers free Wi-Fi at all of its libraries and civic facilities. The library provides over 120 public computing terminals and has over 350 laptops, tablets and mobile Internet hotspots available for loan.

We can conclude that the vast majority of Vaughan residents have access to the Internet in one form or another, and therefore would have access to, and a desire to use City digital services.

Indeed the evidence shows that residents are increasingly using online channels to interact with the City. According to the results of the 2016 Citizen Satisfaction Survey, the City's website is the fastest growing mode of contact with the City. Where the City does offer digital services today, uptake has been reasonable. For example, over 43% of program registrations (more than 50,000) were completed online in 2016. A 6% increase over the previous year. This suggests that a significant proportion of residents will use digital services that may be offered by the City.

In the 2016 Citizen Satisfaction Survey, residents were informed of the City's intention to expand services online, and asked their likelihood of using specific services online. The results indicate significant interest in, and likelihood to use, a range of online services, including online bill payment, voting, and submitting applications and forms.

4 https://goo.gl/jjPKUB
5 http://www.crtc.gc.ca/eng/publications/reports/policymonitoring/2016/cmrs.htm

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Vaughan
Public WiFi
Access Points

KING ROAD

KIRBY ROAD

TESTON ROAD

MAJOR MACKENZIE DRIVE

RUTHERFORD ROAD

LANGSTAFF ROAD

HWY 7

HWY 407

STEELES AVENUE

HWY 427

HWY 27

ISLINGTON AVENUE

PINE VALLEY DRIVE

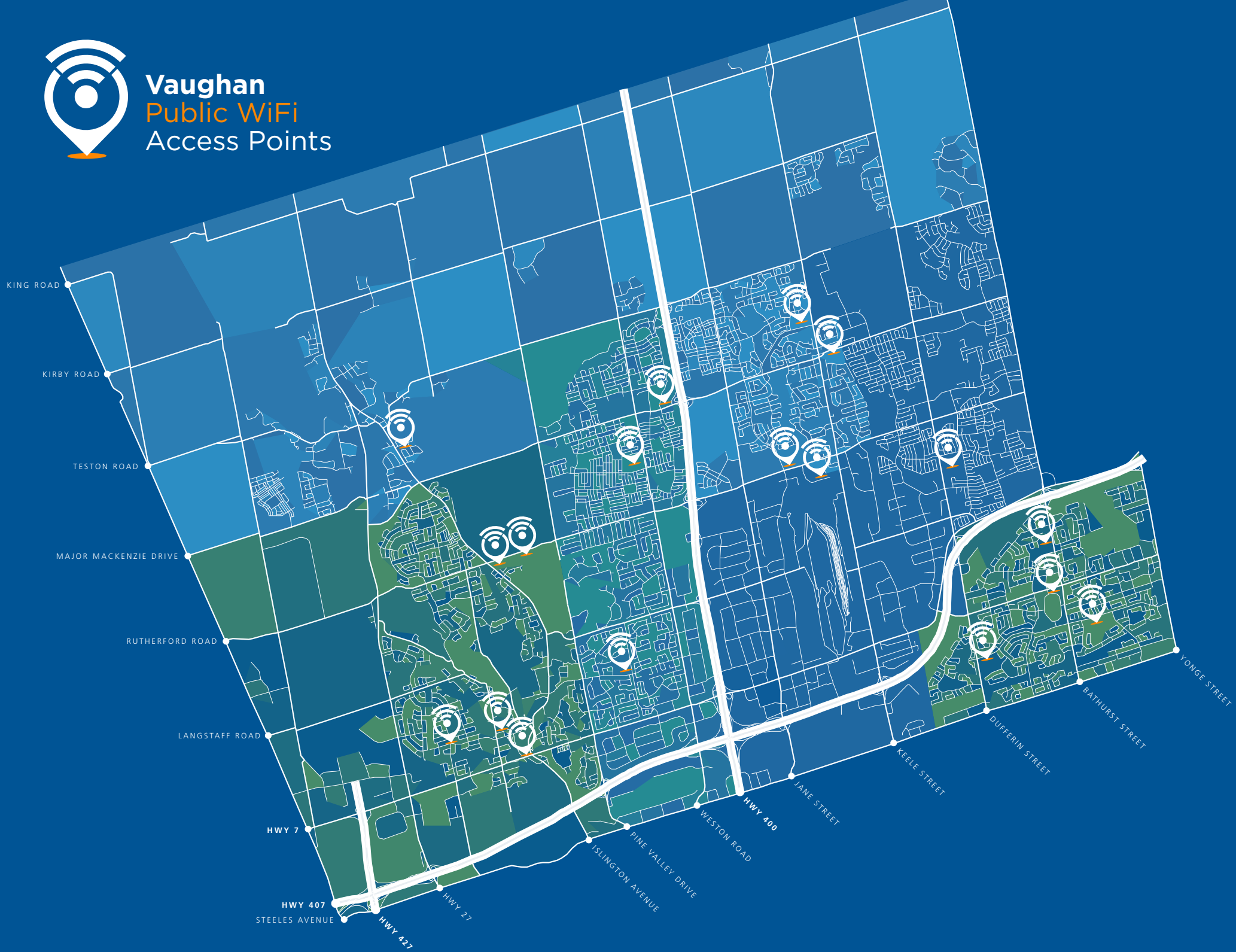WESTON ROAD

HWY 400

JANE STREET

KEELE STREET

DUFFERIN STREET

BATHURST STREET

YONGE STREET

Results from the same survey indicate that the propensity to use online services is high in the 18 - 54 age range, with these respondents indicating a strong likelihood of using online services offered by the City.
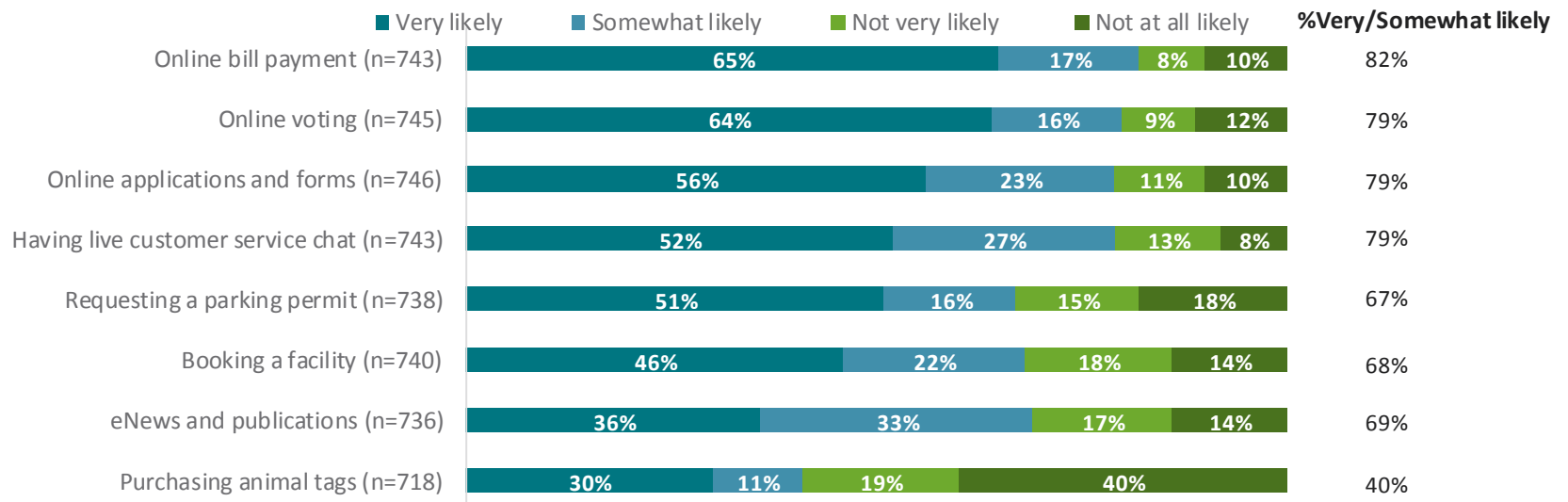
In addition to the interest of Citizens, increasingly the City competes with, and is compared to neighbouring municipalities. Some of these municipalities (such as Markham and Toronto) are prioritizing digital services, and Vaughan has fallen behind comparable municipalities in the digital services it offers. Continuing to maintain the high levels of resident satisfaction that Vaughan currently achieves will increasingly be dependent upon 21st century digital service delivery.

LIKELIHOOD TO USE ONLINE SERVICES

Residents were informed that the City of Vaughan is considering expanding how it delivers services online and asked the likelihood of using specific services online.

Among those who use these services, large majorities of two-thirds or more indicate that they are likely to use nearly all these services online. Residents are most likely to say they would use online bill payment (65% say very likely) and online voting (64%) and least likely to purchase animal tags (30%), with 40 percent indicating they are "not at all likely" to use this online service.

	Very likely	Somewhat likely	Not very likely	Not at all likely	%Very/Somewhat likely
Online bill payment (n=743)	65%	17%	8%	10%	82%
Online voting (n=745)	64%	16%	9%	12%	79%
Online applications and forms (n=746)	56%	23%	11%	10%	79%
Having live customer service chat (n=743)	52%	27%	13%	8%	79%
Requesting a parking permit (n=738)	51%	16%	15%	18%	67%
Booking a facility (n=740)	46%	22%	18%	14%	68%
eNews and publications (n=736)	36%	33%	17%	14%	69%
Purchasing animal tags (n=718)	30%	11%	19%	40%	40%

Q11. The City of Vaughan is considering expanding how it delivers services online. Thinking about this, how likely would you be to use the following online services? If you do not have Internet access on a regular basis, please say so. Base: All respondents (excl. dk/na and those with no Internet access) 2016 (Bases vary)

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LIKELIHOOD TO USE ONLINE SERVICES – BY AGE

Residents aged 35 to 54 are more likely than those aged 55 and older to be "very likely" to use all of the online services. Those aged 18 to 34 are also more likely than those aged 55 and older to be "very likely" to use most of these services.

Very likely to use online services	Age		
	18-34	35-54	55+
Online bill payment	70%	70%	53%
Online voting	62%	71%	52%
Online applications and forms	54%	64%	44%
Having live customer service chat	53%	56%	44%
Requesting a parking permit	52%	57%	40%
Booking a facility	51%	51%	32%
eNews and publications	31%	41%	32%
Purchasing animal tags	26%	38%	19%

Finally, and perhaps most importantly for the sustainability of the City there is a real cost imperative for the City to deliver services via digital channels. Various studies have examined transaction costs across the primary customer service channels. The table on this page indicates average costs of local government service delivery modes taken from research in the UK, Norway and Canada. The results are consistent in their message: digital transaction costs are a fraction of the cost of phone or face to face transactions.

The UK studies indicate that digital can be delivered at approximately 3% of the cost of face to face and 7% of the cost of phone based transactions. Notably from one study postal based transactions are the most expensive transactions.

Thus, doing more with less is genuinely possible for governments that drive services toward digital self service and that encourage adoption of cheaper channels.

Estimated Transaction Cost (in CAD)

Service	UK[6]	Norway	Canada[7]
Web	$0.14 - $0.27	$0.46	$0.91
Phone	$5.02 - $6.01	$6.23	
Face to Face	$15.28 - $18.66	$12.46	$12.00 - $30.32
Postal	$21.45		

Indeed, with the anticipated growth of the City, scaling existing processes as-is will require significant staffing growth. Scaling the City using digital practices to design more efficient processes, to re-think and redesign services and to shift responsibilities to the customer offers a viable path to meeting the demands of the City's growth, while remaining financially sustainable.

6 Figures taken from UK Government Digital Efficiency Report, 2013, https://ofti.org/wp-content/uploads/2012/12/13281_digital-efficiency-report.pdf
7 Figures taken from City of Toronto report on Counter Service, https://www1.toronto.ca/City%20Of%20Toronto/City%20Manager%27s%20Office/Strategic%20&%20Corporate%20Policy/counter_ses.pdf

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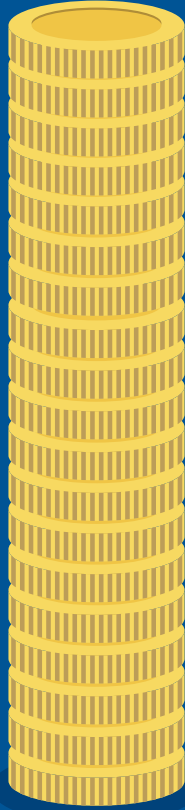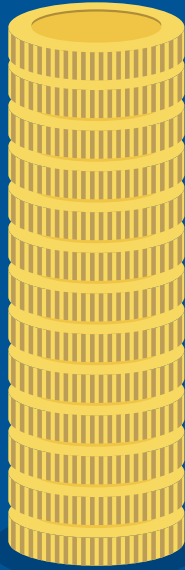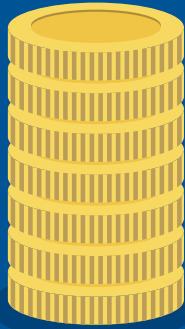
1.4 Approach to Developing the Digital Strategy

The Office of the Chief Information Officer (OCIO) led the development of this Strategy in an extremely collaborative and consultative manner. Input from Council, Corporate Management Team (CMT), Senior Management Team (SMT) and stakeholders from various departments was sought at multiple points. The Strategy was developed in multiple stages:

• Digital Strategy 1.0 developed by the CIO, identified an early Vision for the Digital Strategy which was used to socialize and educate Council, leadership, and stakeholders about important digital concepts and potential strategic directions

• Digital Strategy 1.5 saw a Digital readiness assessment conducted. The results of which identified that the City was ready to move forward with a Digital Strategy

• Digital Strategy 2.0, this Strategy document, has evolved the original vision into a strategic plan with clearly identified themes, projects, an implementation plan

and supporting organization and governance recommendations.

This document, the Digital Strategy 2.0, was developed by OCIO, with the support of Perry Group Consulting Ltd. between March and June 2017. The Strategy development included a peer review of international municipal digital strategies, a series of working sessions with OCIO staff, and representatives from the Library and Communications department to develop an initial Digital Strategy straw man - a draft set of themes and goals. Meetings were held with the City Manager and Deputy City Manager's to share and seek feedback on the draft. A half day workshop was held with CMT and SMT members to share the project team's learning, to share the draft Digital Strategy and to identify areas of focus and priorities.

This draft strategy has been developed based on the input received to date. The draft will be shared broadly for feedback before being finalized.

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1.5 Links to Other City Strategies

The Digital Strategy has strong links to a range of other City strategies.

Most importantly the Digital Strategy is complementary to, and dependent upon the City's 2014 Corporate Technology Strategic Plan. The two Strategies share a common DNA - a focus on customer centred services built upon technology. A number of the initiatives identified in this Strategy have been previously identified in the Corporate Technology Strategic Plan (CTSP).

Combined the CTSP and Digital Strategy

form the foundation for the delivery of Service Vaughan, Smart City and a range of other Corporate Initiatives that in turn support the Term of Council Strategic Map (2014-2018).

The linkage between the Digital and Service Vaughan Strategies is particularly critical because of the strong inter-dependency between initiatives. For example, the implementation of a new Client Relationship Mangement (CRM) system is at the centre of the Service Vaughan strategy but will also be central to many of the Digital Strategy

deliverables such as the MyAccount feature, web service requests, and web forms. These two programs must work closely together to buttress each other's success.

The Digital Strategy is not a Smart City strategy. Nonetheless, a number of Smart City initiatives are emerging at this time - including the LED streetlight replacement project, the wastewater flow monitoring pilot, and the creation of the Smart City Task Force - and thus this Strategy recommends several actions that will position the City well to support Smart and Intelligent City initiatives as they emerge.

1.6 Timeframe of the strategy

The strategy covers the time period 2017 - 2021, with a number of quick wins identified in 2017/18.

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Citizen Outcomes Internal + External

- Sustainability
- Cost Savings
- Engagement
- Digital Literacy
- Economic Attraction
- Citizen Satisfaction
- Digital Transformation

Delivery

Corporate Initiatives | Smart City | Service Vaughan
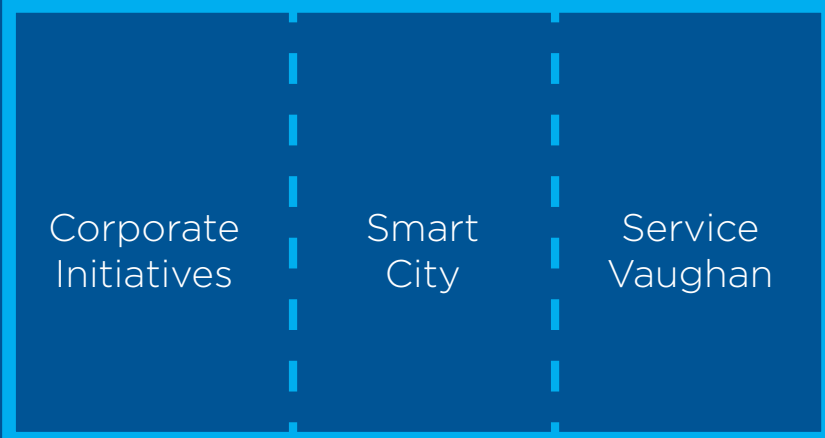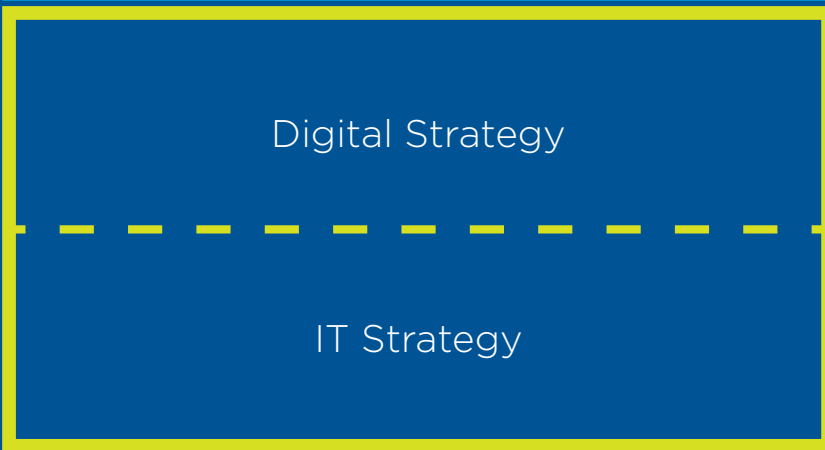
Logic / Framework

Digital Strategy

Foundation / Infrastructure

IT Strategy

2.0 A Vision for #VaughanDigital

2.1 The Vision

The vision and goal for this strategy is simply:

"Making Vaughan better for people in our digital age."

In this context we are referring to people as citizens (residents, businesses, visitors) and the staff of the City of Vaughan.

The City's Customer Service Strategy recommends that the City become citizen centric; designing its services primarily around customers needs and from the citizen's perspective, not from the City's perspective. The Digital Strategy supports and reinforces this goal. Being more citizen centric in 2017 means digital services. Digital done right is inherently customer centric - abstracting away service complexity, making it simpler for customers to interact with the City.

It is important to understand that Digital is more than pretty websites. It is about fundamental change using service design to build services that are simpler for the customer to interact with and easier and cheaper to operate for the City.

2.2 Service Design

What is service design? The notion of a service has two important aspects that are key to the digital strategy:

The digital service (the website, web page or app) with which the customer interacts to conduct a transaction with the City.

The underlying business service that is being provided by the City; its intent, the underlying legislation, policy or bylaw that supports or guides the service, the way the service is designed and delivered, and the processes that it operates by building a digital service without re-thinking the underlying service itself, or atop of flawed or legacy logic will result in a sub-optimal digital service.

If high quality digital services is our goal, we need to be ready to think about the underlying business processes, what makes them complex for customers to understand and interact with, and make changes to simplify the services to make them easier to administer.

So rather than simply digitizing existing processes, service design must look more holistically at goals and objectives, and build services that better meet those objectives. This means challenging the status quo and thinking hard about better ways to approach old problems.

To tackle the type of work described above service design employs specific techniques such as user research and customer journey mapping to truly understand service user needs and their expectations of the Customer Experience (CX), not based upon assumptions of what they need, but through talking to customers and testing ideas and hypotheses.

Service Design:
A Simple Example
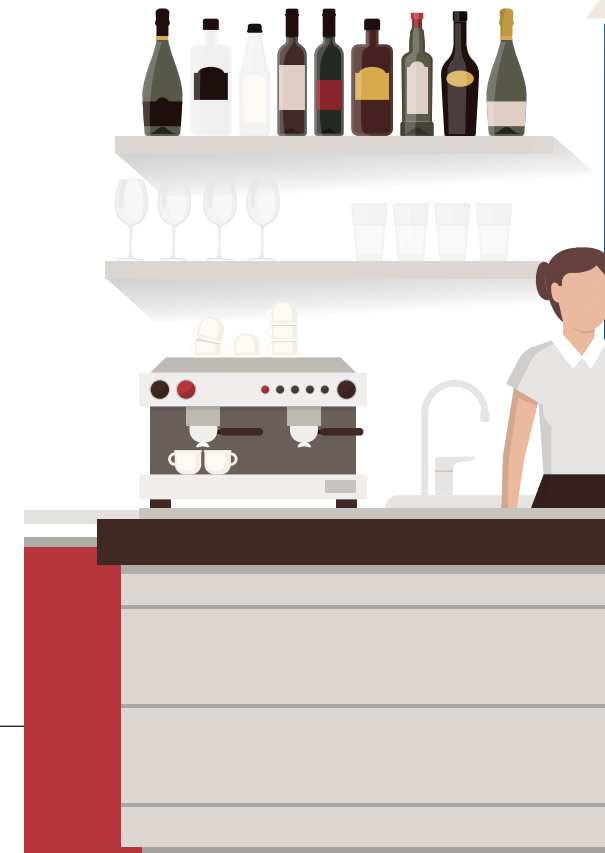
A municipality, while reviewing the process of opening a restaurant in their City, realized that 4 separate applications with separate forms and mandatory visits to City Hall counters for payment processing was required to secure the necessary permissions. This was a customer hostile process that had evolved over time to satisfy the needs of departments, rather than being consciously designed to be simple for the customer. Using a customer centric service design approach, the City re-designed the process so that there was one intake process for customers, supported by one online form which collected all required information to process the application and payment. This form then shares the required information with each of the departments involved, allowing them to process their portion of the application while allowing customers to track the status of their application online.

2.3 Digital Transformation

There are countless areas across the City which are similar to the Service Design example highlighted on page 19, e.g. planning a street event or renovating a building. But this itself represents just one type of example. In many cases throughout the City, services have evolved over many years as the City has grown and staff have changed. Often a problem arises, a policy is set, a form is built and a process established. Changes are made as staff learn more about the process, its operation and any unintended consequences. Assumptions build upon assumptions until "it's how we've always done it" is the only justification for the current process.

As the service design example illustrates, when you can step back and think about things from the customer's perspective, often there is a realization that some of the assumptions upon which the process is based are invalid. That existing policies should be reviewed and that the process could then be redesigned to become more customer centric.

Indeed many assumptions upon which City processes have been designed - e.g. we need a physical signature on this form, we need an engineering stamp on this drawing, we need someone to be physically present, we can't take electronic payments for certain types of transactions - are false. There are digital solutions to each of these barriers, but mindsets, policies and processes need to be altered to support their use / implementation.

Legacy processes and systems are one of the largest inhibitors to digital success. So, when we talk about Digital Transformation - this refers to the need to think more holistically about service design. Using digital as the trigger to look more deeply at a service and rethink it, redesign it, transform it.

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2.4 People and Culture Change

At its root, Digital is not really about technology itself - at its core it is about understanding people; their needs and motivations, and implementing change within the organization to design more human services.

Digital is about adopting a new approach and a new way of thinking about services and service design. Core to success is a willingness to challenge the status quo, to collaborate, the empowerment to act across departments to break down silos and to seek out a "better way". It's about applying design thinking to business problems and challenges.

To meet this challenge the City will need staff with new skills in design thinking, user research, journey mapping, and in digital service development skills. These are new skills that the City does not currently possess - and the City will need to address this skill gap (this is discussed further in later sections).

Because Digital is about fundamentally challenging the status quo, cultural change will be critical. Challenging the "it's how we've always done it" approach can either be exciting or threatening to staff. The City as a whole needs to develop its change management muscles. Management and staff need to become more comfortable with change - leading, handling and adapting to change.

Educating will be important to help management think about how they design services, to help staff think more critically about how they do their jobs and how services are delivered. Empowering project teams to think differently and to challenge the present state of affairs will also be critical to success.

2.5 Omni Channel Service Delivery

While the City should encourage adoption of digital channels, it is important to recognize that the City's Customer Service Strategy champions an omni channel (face to face, phone, digital) approach to service delivery.

Thus the pursuit of digital does not mean that other traditional channels such as phone or face to face should or will be eliminated.

These channels will continue to be offered indefinitely by the City for those that wish to use them.

Nonetheless, as new digital services are made available, the City should focus its energy on encouraging channel shift. Channel shift is a term used to describe encouraging those that use traditional channels to move to more cost effective digital channels through promotion and incentives. Thus, those that come in to City Hall for tax payments may be assisted in setting up a direct deposit, or customers that contact Access Vaughan may receive recorded voice reminders of the digital capabilities of the city's website while on hold. Promoting and incentivising adoption of digital services is discussed further later in the document.

2.6 User Experience

User experience, also known as UX, refers to "the overall experience of a person using a product or service (e.g. a website), especially in terms of how easy or pleasing it is to use" Oxford Dictionary. UX design is about giving people delightful and meaningful experiences - leaving them happy after using the service.

We've all experienced websites that ask you to enter information that you have already input, or a form that tells you it can't be submitted, but you can't tell where the error is - this creates extreme user frustration. What has been learned over the years is that where there is any friction in using a tool online whatsoever (e.g. poor visual design, annoying user interface elements, bad data validation) this discourages adoption and use of the product.

A UX Framework such as Basic UX (illustrated on page 23) provides a framework for those developing and delivering services to ensure a high quality user experience.

Digital is about doing the hard work internally, so that customers don't have to. It means sweating the details and building solutions that are easy to use for the customer, that prevent customers from submitting the wrong information, and that are delightful and easy to use.

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BEAUTY
Is it aesthetically pleasing?

ACCESSIBILITY
Can 'everyone' use it?

SIMPLICITY
Does it make life easier?

INTUITIVENESS
Is it easy to learn?

CONSISTENCY
Does it match the systems?

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3.0 Four Focus Areas for #VaughanDigital

To support the vision, the Digital Strategy introduces a set of Focus Areas and Goals and in the implementation plan (see Section 5) a set of initiatives. Because there are so many opportunities in the Digital realm, the City is choosing to focus on a small number of areas - which have been whittled down from the original vision identified in Digital Strategy 1.0.

1

3.1 An Engaged Community

A world class City is built through collaboration and with Citizen and multi-sector co-operation. An effective communications and engagement strategy should foster a vibrant and engaged community that promotes diversity and inclusion. We believe that citizens should be heard. The City should actively seek to create opportunities using digital channels to engage in multi-directional, ongoing conversations with the community on important issues.

2

3.2 Citizens can do business with the City through digital channels

The City believes that Citizens should be able to transact with the City anywhere, using the tools that work for them, 24x7. The City will apply Internet generation techniques to designing end to end services to be simple, easy to use and designed digital and mobile first. While phone, face to face and other channels such as online chat will always be available, we aspire to the community wanting to use our Digital services in preference to other channels because the service and experience is so good.

3

3.3 Be OPEN

The City aims to be open, transparent and accountable. We believe that openly sharing information and data with the community without restriction and in formats that allow the data to be used, analyzed and interpreted enables new perspectives and encourages valuable community discourse.

4

3.4 Internal Digital Transformation

City processes should be designed to be simple, to reduce the number of times customers have to come in to City Hall and to keep customers proactively informed, so that we reduce the number of times that they need to contact us to find out what's happening. We need to change the culture of City staff so that they begin to think digital first.

3.1 Focus Area #1: An Engaged Community

Did You Know

The City has more than **11,700 Twitter followers** on its main account (@City_of_Vaughan).
Other corporate Twitter accounts (e.g. Fire, Vaughan Public Libraries, Snow) also have thousands of followers.
Vaughan also has over **4,300 Facebook** and **1,800 Instagram followers,** and **250 followers** on **YouTube**.

1 A world class City is built through collaboration and with Citizen and multi-sector co-operation. An effective communications and engagement strategy should foster a vibrant and engaged community that promotes diversity and inclusion. We believe that citizens should be heard. The City should actively seek to create opportunities using digital channels to engage in multi-directional, ongoing conversations with the community on important issues.

3.1.1 Goal # 1: Informed Citizens that know what's happening in their community

The City is committed to effective communication with Citizens - communicating where it is most convenient for them. That means using various traditional, digital and social channels to make sure member of the community get access to easily understood information that is relevant to them. We will:

- Focus on providing plain language, simple to understand, jargon free content, by developing web content standards and revamping the editing and publishing process for City web content.

- Communicate where people are, in ways that are are meaningful to them (using channels other than our website, for instance at Twitter, YouTube, and Facebook). That means overhauling our digital communications and social media strategy, providing clear guidelines and standards for consistent and aligned use of digital and social media across the City

- Integrate social media with a corporate CRM to ensure that service requests submitted via social media channels can be effectively resolved

- Push city content and data to services where it will be easier for citizens to find and more accessible (e.g. google maps updates, road closures to Waze, Yelp)

3.1.2 Goal # 2: Citizens are fully engaged in the City

Engaging Citizens in a two-way conversation and integrating Citizens opinions into City planning is imperative in building a City that we are all proud of. We are committed to improving our engagement with the community on key issues - and will use digital tools to extend our reach. We will:

- Develop an engagement framework to guide all our engagements and a playbook to help departments embrace digital engagement techniques

- Establish a single place on the website where all City engagements will be published and promoted (e.g. vaughan.ca/engagement)

- Explore the use of idea generation, voting tools and an online citizen panel to improve community input and dialog on key topics and issues

- Develop a digital town hall capability, so that Citizens can attend open house and consultation events virtually

- Use digital tools to expand the ability of the community to provide us feedback on development proposals

- Improve our ability to receive and respond to your feedback on plans, strategies and policies

vaughan.ca/**Digital**Strategy

3.1.1 Goal #1: Informed Citizens that know what's happening in their community | **27**
3.1.2 Goal #2: Citizens are fully engaged in the City

3.2 Focus Area #2: Citizens can do business with the City through digital channels

Did You Know

The City website is an increasingly important source of interaction with the City for Citizens. In 2016 we saw:

- **1,358,500 unique web sessions**
- **731,800 unique web users**
- 42% of the users of the website visitors were on a mobile device
- Over **1,000,000 web searches** (e.g. Google, Bing) for Vaughan programs and services

2 The City believes that Citizens should be able to transact with the City anywhere, using the tools that work for them, 24x7. The City will apply Internet generation techniques to designing end to end services to be simple, easy to use and designed digital and mobile first. While phone, face to face and other channels such as online chat will always be available, we aspire to the community wanting to use our Digital services in preference to other channels because the service and experience is so good.

3.2.1 Goal # 1: Enhance the City's websites to make them easier to use

The City's website is one of its primary customer service channels which will continue to grow in importance. The City's website will become the canonical source for digital services, with a focus on web delivery over an app delivery approach. We will work to ensure that the City's websites are consistent, engaging, on brand, available on every platform and device, and easy to use. We will:

- Implement a website redesign, with fully responsive design to support mobile and other devices. A digital citizen testing panel will be involved in web and digital service testing and in the iterative redesign process for the City's new website at beta.vaughan.ca

- Define city inclusivity and accessibility standards, ensuring AODA compliance and formalize processes for testing and certifying compliance with standards, including introducing a community testing program for accessible services

- Provide capability for customer feedback on all City web pages, building an internal and public dashboard to highlight areas that need improvement

- Transparently publish website analytics so that customers and staff can easily understand how our website and digital services are being used

- Implement capabilities (linked to MyAccount) to gather user preferences and enable complementary service promotion (e.g. summer camps or library programs if your child is registered for swimming) throughout City websites

3.2.2 Goal # 2: Launch new digital services, designed with and for the customer

The City will build upon the success of existing services, implementing a suite of new end-to-end digital services (e.g. service requests, permit applications, bookings, and web forms). We will prioritize high volume, high impact and highly demanded service areas with a commitment to offer all services that process more than 5000 transactions per year online by 2021.

We will introduce:

- An online MyAccount capability to provide customers with a single way to sign on to use our digital services

- Billing, account management capabilities

- Online payment services for a range of City services

- Online service requests so customers can easily report issues and track their resolution

- An online Service Vaughan knowledge base so that customers can quickly find answers to common inquiries

- Service Vaughan online chat

- Development application search and details lookup

- Building permitting online

- Digital plans submission

- Business licensing online

- Other permits (e.g. Fire)

- Web forms to replace existing pdf and word forms

- A 'property finder' providing simpler local information - e.g. nearest park, garbage collection day, wardCouncillor

- A single, consolidated City of Vaughan App
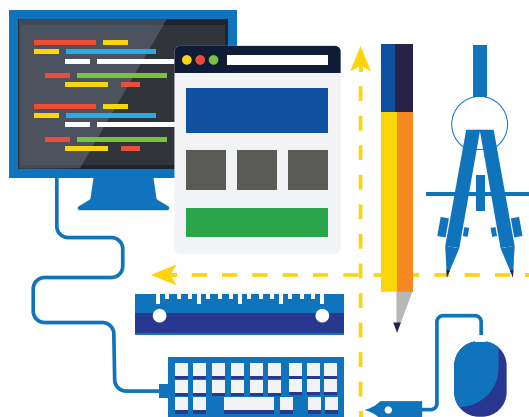
City call centre records from Access Vaughan, and the web usage during 2016 indicate the following areas as areas of high transactions.

- City Jobs and employment opportunities

- Development applications

- Solid waste

- Recreation: Programs / Fitness / Camps / Facilities

- Parking

- Taxes

- Animal adoption

- Bylaws (Zoning)

- Council meeting agendas, minutes and extracts

- Parks and Forestry

These areas represent opportunities for potential digital improvement. More detailed work is needed in each area to fully understand the opportunity, and this may mean improved promotion of existing services, improvement in web content or the development of new digital services.

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Did You Know

Citizens can get a visitor parking permit, apply for City jobs, book recreation programs, and pay library fines online.

Over **11,000 Vaughan Online user profiles** were registered by the end of 2016.

The City's MyWaste App has over **6800 downloads** and it's Rec App has been downloaded 2060 times.

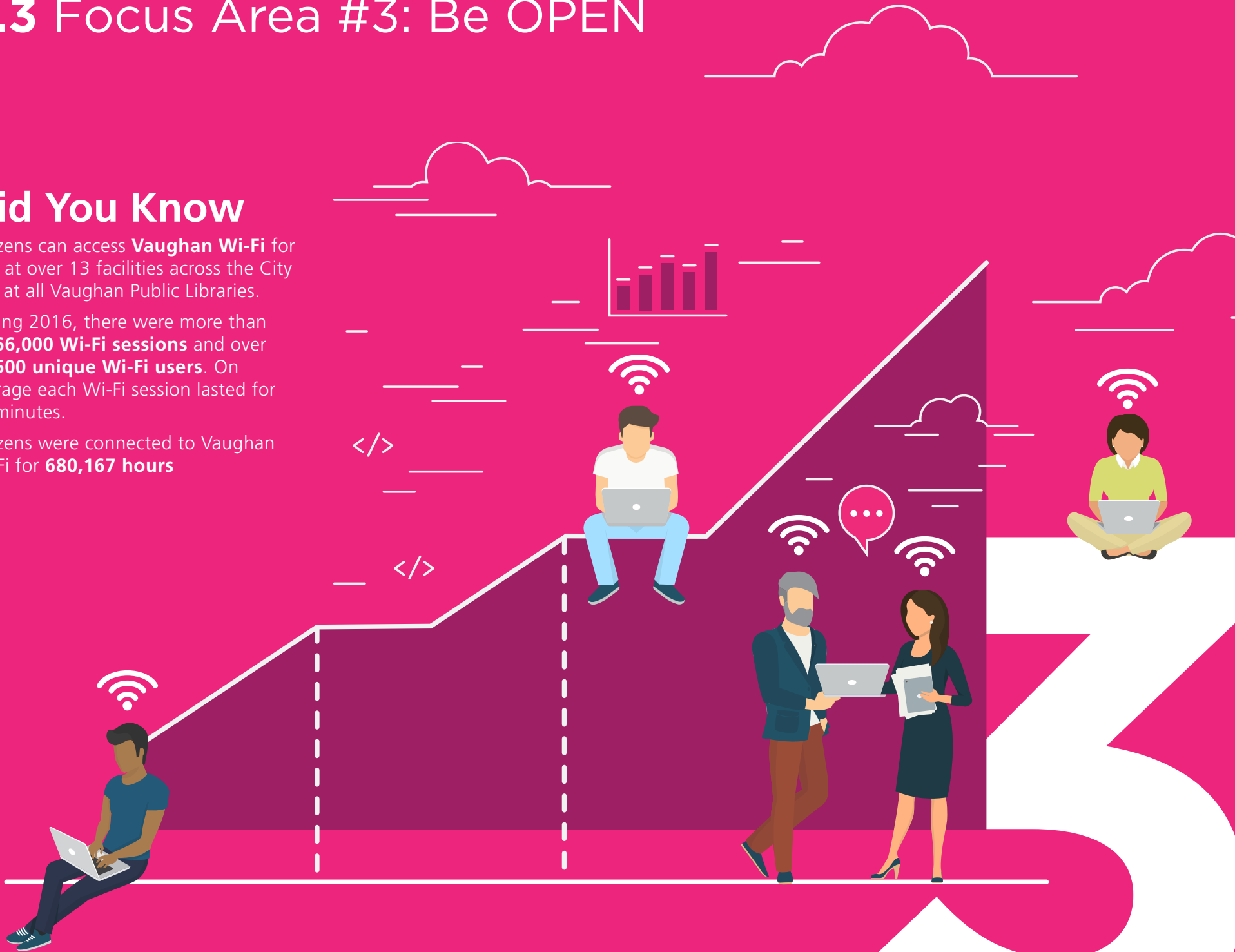NEWS

2k

3.3 Focus Area #3: Be OPEN

Did You Know

Citizens can access **Vaughan Wi-Fi** for free at over 13 facilities across the City and at all Vaughan Public Libraries.

During 2016, there were more than **1,166,000 Wi-Fi sessions** and over **56,500 unique Wi-Fi users**. On average each Wi-Fi session lasted for 35 minutes.

Citizens were connected to Vaughan Wi-Fi for **680,167 hours**

3

The City aims to be open, transparent and accountable. We believe that openly sharing information and data with the community without restriction and in formats that allow the data to be used, analyzed and interpreted enables new perspectives and encourages valuable community discourse.

3.3.1 Goal # 1: Be an open and transparent government

The City is committed to operating in the open and transparently. Taxpayers and the public should be aware of decisions being made and have access to information that is used to inform decision making at the City. We will launch:

- A mandatory Lobbyist registry
- A new agenda management system, supporting full searching of all current and historic agendas, minutes and associated documents and reporting

- A public performance measurement dashboard, setting targets for City services and allowing Citizens to monitor and analyze performance
- A more transparent approach to Freedome of Information (FOI) requests

3.3.2 Goal # 2: Open our data to the community

We believe that open data delivers value to the community, and provides opportunities for the community to contribute to solving City challenges. We also believe it creates a virtuous circle of data improvement within the City. We will:

- Work to develop an Open Data framework and policy
- Release open data sets by the end of 2019

- Work with Economic Development and other City partners to engage with the community (through events and community challenges) to promote and stimulate interest in the use of City data to assist in solving community challenges

3.3.3 Goal # 3: Provide open and free Internet access via Vaughan Public Wi-Fi

We will provide citizens and visitors access to high speed Wi-Fi for free at many civic locations throughout the City (including City buildings, Libraries, parks and civic spaces). We will:

- Make a single branded Vaughan Public Wi-Fi network available at all city facilities (includes city office, community centres, libraries, and fire halls)
- Expand Vaughan Public Wi-Fi to the Vaughan Metropolitan Centre (VMC)

- Expand Vaughan Public Wi-Fi to civic open spaces and parks
- Explore opportunities to offer Vaughan Public Wi-Fi with partners (e.g. Hospital)

vaughan.ca/**Digital**Strategy

3.3.1 Goal #1: Be and open and transparent government | **33**
3.3.2 Goal #2: Open our data to the community
3.3.3 Goal #1: Provide open and free Internet access via Vaughan Public Wi-Fi

3.4 Focus Area #4: Internal Digital Transformation
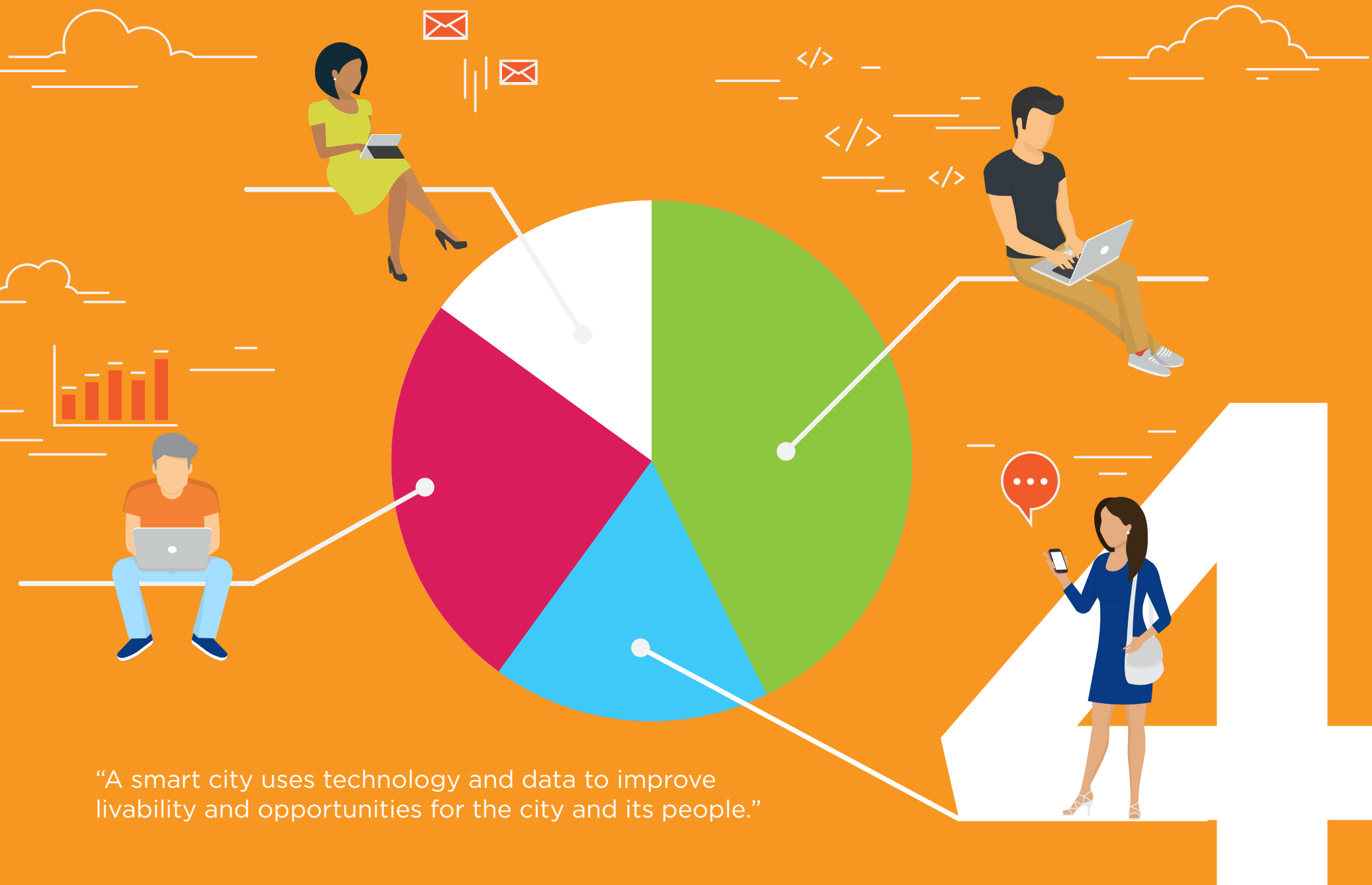
"A smart city uses technology and data to improve livability and opportunities for the city and its people."

4 City processes should be designed to be simple, to reduce the number of times customers have to come in to City Hall and to keep customers proactively informed, so that we reduce the number of times that they need to contact us to find out what's happening.

To deliver this type of service relies upon process digitization. Internal processes such as permitting, licensing or payments cannot be made available to customers digitally unless they have been effectively digitized in the back office. Furthermore, we need to change the culture of City staff so that they begin to *think digital first*.

3.4.1 Goal # 1: Internal Digital Transformation

We need to ensure that everyone that works at the City, from top to bottom, is knowledgeable about the possibilities of digital, and empowered to drive change by designing services to be digital first. We will:

- Establish leadership for the City's digital program

- Develop a digital leadership training and education program for leaders and service managers

- Set digital standards to ensure that all the City's digital services are consistent and familiar to customers

- Develop a set of playbooks which identify guidelines and best practices for digital service design, rapid and iterative development, customer journey mapping, user interface design and alpha and beta testing cycles

- Develop a training program for project managers, business analysts, service designers and project teams to encourage them to think "digital first"

- Introduce and deploy solutions and devices to empower the City's mobile workers and front line staff

3.4.2 Goal # 2: Modernize city processes

Process digitization and a focus on underlying service design activities is critical to delivering effective digital services. This is where the Digital and Corporate Strategic Technology Plan (CTSP) intersect. As laid out by the CTSP the City is undertaking an extensive program of systems and process modernization designed to digitize and streamline core internal processes, which will ultimately support and enable streamlined and digitized

services. Some of the initiatives currently planned include:

- A procurement modernization program

- The implementation of a new CRM system, website integration and the ability to submit and track service requests online

- A new work order (Assets) management system, which will support end-to-end resolution of service requests

- A replacement of the current recreation program booking system - providing easier more flexible capabilities for customers and staff

- Implementation of Amanda Public Portal - offering online services for building, licensing and bylaw

- Learning management system to support internal performance goals and learning

3.4.3 Goal # 3: Modernize the tools City staff use and the ways we work

Also led from the IT Strategy the City is modernizing the way it works in a number of areas, including adopting modern collaboration tools, adopting cloud computing, supporting flexible working and mobilizing field staff. We will:

- Adopt modern collaboration capabilities, including Office 365, Skype for Business to support more flexible, remote working
- Adopt cloud computing solutions and capabilities to improve flexibility and agility of solution delivery

- Provide technology to mobilize field crews, so that customer complaints can be immediately dispatched and resolved, and so that we can gather more information about our operations to support ongoing optimization efforts.

3.4.4 Goal # 4: Evolve into a data driven corporation

A hallmark of Internet driven business is the availability and use of data (e.g. customer preferences, customer behaviours) to inform business decisions, and to support testing of enhancements and optimizations. Again the IT Strategy has laid the foundations. We will intelligently use data and information to optimize our service delivery. Data must be fit for purpose, and pre-prepared to make data analysis simpler and easier. We will:

- Define corporate roles and responsibilities for data management
- Implement a Master Data Management program to clean up data related to Employee, Citizens, Business, Addresses, Streets and Assets
- Implement tools to make it simpler for staff to search and find, access and mash-up data across departments

- Develop data analysis, data warehousing and big data management skills and capabilities in OCIO and in key departments
- Implement big data / reporting and dashboarding tools to support operational analysis and decision making

3.4.5 Goal # 5: Getting Ready to Get Smart

The recent announcement of Infrastructure Canada's Smart City Challenge confirms the importance of, and shows the maturation of the Smart City opportunity. As stated in their announcement of the competition:

"A smart city uses technology and data to improve livability and opportunities for the city and its people."

The City has long used smart technologies, for example for preemption of traffic lights as Fire Trucks approach. The notion of smart itself is not new. However, the emergence of Internet of Things and Smart City at an industrial, city-wide scale is.

Many new opportunities are beginning to present themselves, such as the following initiatives which are underway:

- LED streetlights with the ability to establish a narrow band network *
- Water flow monitoring and controls - to minimize leaks and manage pumps *
- Smart utility meters - automated remote meter reads, real-time monitoring of consumption *

36 | 3.4.3 Goal #3: Modernize the tools City staff use and the ways we work
3.4.4 Goal #4: Evolve into a data driven corporation
3.4.5 Goal #5: Getting Ready to Get Smart

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Other potential areas include

- Smart traffic management systems
- Smart parking - sensors to identify parking availability, pay by phone payments
- Smart irrigation systems - automated controls to irrigate based on sensed conditions (moisture) or weather
- Smart garbage systems - video tracking of garbage collection, RFID tagged bins, garbage bins that alert when they are nearing full

Not all of these opportunities will be winners; but, the City must ready itself to take advantage of the opportunities that could drive costs savings or add significant value to the community - in the areas of traffic management for instance.

First, the City must develop internal knowledge and prepare those that will be involved in future Smart City initiatives. Corporately a team of leaders from OCIO, Strategic Initiatives, Legal, Finance and Procurement, Economic Development, and Public Works departments should come together to coordinate the City's approach to Smart City and to play a large role, with the community in the development of the City's Smart City strategy.

Infrastructure Canada's recently announced Smart Cities Challenge[8] is providing funding to incentivize municipalities to stimulate Smart City work - thus there is an imperative for the City to get moving in this area. This team should begin work immediately to develop

a proposal for Infrastructure Canada's Smart Cities Challenge.

The OCIO should develop an internal Smart City technology team with network, storage, security, data and data analytics skills. Members of both groups should attend conferences and develop working relationships with other Cities and vendors to begin to build strong internal knowledge of the opportunities and pitfalls associated with Smart City initiatives.

Smart City initiatives must be coordinated and aligned; the intent must be to avoid proprietary solutions, and ensure that investments (in common networks for example) can be made once and reused by other initiatives. The corporate team should identify clear guidelines to help identify how smart projects are defined, and how smart projects should be handled. The City can then use the existing IT Governance framework, with escalation to CMT as deemed necessary by OCIO and/or stakeholders, to identify, align and coordinate 'Smart' proposals and initiatives.

The Smart City technology group should recommend corporate policies and standards to ensure that smart initiatives are efficiently and sustainably developed and deployed, and that the City's data and privacy responsibilities are clearly defined.

Through the City's partnership with the York Telecom Network (YTN), the City's wired and wireless networks will be expanded and extended to support IoT and other smart city connectivity needs.

The City has long used smart technologies (e.g. preemption on traffic lights for Fire Trucks), so the notion of smart is not new. However, several new initiatives such as sanitary / storm water flow monitoring and analysis pilot project and the LED streetlight conversion are emerging at this time that give the City an opportunity to establish standards, processes and policies that will support those that follow.

Looking to the future, the City will continue to work with the private sector through the City's Test City initiatives, and with other Regional and public sector partners to explore Smart City and innovative opportunities.

Did You Know

You can borrow a laptop, tablet, GoPro, GPS and Internet hotspots from the library. Laptops, tablets and hostpots were lent out over **25,000** times in 2016.

The Library hosted over **320,000** public computing sessions in 2016.

The Library also offers learn to code labs, 3D printing and scanning, a music recording studio, and virtual reality systems. Over 1,100 patrons have taken advantage of these services.

4.0 Building a Digital Partnership with Vaughan Public Libraries

If you've not taken a visit to the City's new Civic Centre Library you are missing out - it's a fabulous facility. If you do visit, if you take a look around you will see digital everywhere. The library is full of technology and full of people of all ages working on the public access computers, or using Wi-Fi with their laptops, tablets and smartphones. Others may be trying out 3D printing for the first time, or using an oculus rift virtual reality headset, or in one of the labs taking a first time coding program.

VPL's vision is to enrich, inspire and transform. It's mission is to offer welcoming destinations that educate, excite and empower our community.

To educate, excite and empower the community in the digital age means helping the community take advantage of new and emerging digital opportunities that might be out of reach individually; ensuring that people have access to digital capabilities and education so that they are not left behind.

Vaughan Public Libraries have long been a champion of technology and empowering the use of technology by people in the community. They have done this by providing:

- Access to public computer terminals
- Access to high speed Internet services through public Wi-Fi at library facilities
- Access to technology education programs
- Loaner programs available to the community that include technologies such as laptops and tablets, eReaders, mobile Internet, GPS, and cameras
- Learn it, Make it, Create it programs which have introduced new technologies such as the Occulus Rift Virtual Reality system and recording studio technology
- Online library catalog, holds, fines

VPL will continue to push the envelope, offering new and innovative ways to help the community take advantage of new and emerging technologies.

The City can learn from the Library's experiences. The library has been blogging, using social media and offering online services for many years, so the library has developed experience that can be shared with the City. The City's digital team should work closely with the library to share experiences and learn from each other. Due to the Library's more flexible, open and experimental nature, the City's digital team may find working with the library as a Digital Incubator for ideas and concepts that require experimentation, before they may be more broadly adopted in City programs to be an advantage.
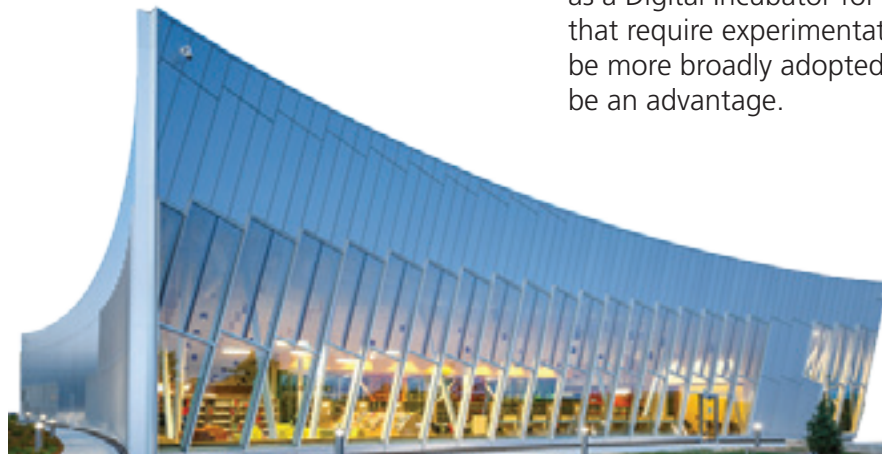
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5.0 Delivering the Digital Strategy

5.1 Establish The Digital "Program"

"A program is a group of related projects managed in a coordinated manner to obtain benefits not available from managing them individually." Project Management Institute

The Digital Strategy is made up of a range of initiatives, some of which are already underway, some are planned, and some are new initiatives. Initiatives will be run from various departments and divisions. Consistency and a common thread must be weaved between all of the initiatives for Citizens and

Council to see the biggest return on their investment. Together the initiatives must be coordinated and aligned into a cohesive set of deliverables and outcomes. It is a classic program - which requires program leadership and coordinated governance.

5.2 Establish Digital Leadership

Strategies don't get things done. People do. The City needs someone to lead and champion Digital and someone to lead the delivery of the program. That person needs to challenge the status quo. They need to push hard to change the way services are conceived, designed and delivered. They need to educate and cajole service owners into trying a different approach.

It is recommended that the City establish a new Digital Transformation and Customer Experience (DT + CX) Manager position to champion the vision of Digital and oversee the delivery of the Digital program. The position should be part of the OCIO and report directly to the CIO.

This role would be responsible for leading the City's digital vision and:

- Providing better services to connected customers

- Providing corporate digital leadership
- Setting standards for the use of digital (websites, social, communications, apps)
- Educating colleagues about the use of digital tools and techniques
- Being open and transparent (develop in the open, use open source technologies)
- Being agile, iterative and data driven

Leading the coordination and delivery of all projects identified in the Digital Strategy would also be the responsibility of the Digital Program Manager. This would involve coordinating the projects and initiatives across the program to ensure alignment and consistency, and that the desired customer outcomes (e.g. consistent user experience, end to end services) are attained.

Although many of the projects in the program have a defined start and end point, the DT + CX Manager should ideally be a permanent position because there will be an ongoing requirement to continually evolve the Digital platform and services. A contract position for a 5 year period may be considered to establish the importance of the role, but it is not recommended that this be the preferred approach.

Note that this role has been deliberately separated from the Manager of Digital Services. The Manager of Digital Services already has a broad portfolio, including City websites, CRM, Office 365, and the SharePoint environment. That role is focused, appropriately so, upon supporting and maintaining operational services in these areas and therefore simply does not have the bandwidth necessary to lead and drive the Digital program.

5.3 Establish Digital Governance

While the Strategy recommends allocating responsibility for digital to the Digital Program Leadership, to deliver effective Digital Services the City needs a more coordinated approach across all departments than it currently uses. This means defining who can greenlight a new smartphone app, a new website, a new web domain, how we design new services, what are our branding standards, and what are accessibility and usability standards. To help achieve this the City should implement a Digital Governance model.

Digital governance means:

• Formally establishing accountability for the Digital Strategy

• Establishing roles and decision making authority for the City's digital presence and services, including websites and microsites, social media, mobile apps and digital services (online services)

• Establishing policy, procedures, standards and guidelines to direct digital decision making.

5.3.1 Establish Accountability and Responsibility

As noted already, OCIO will lead the Digital Program, partnering with Communications, Service Vaughan, Strategic Initiatives and other Business Units through a Digital Governance model in the delivery of the program.

Given the centrality of the digital platform to the City's customer service strategy a strong partnership with Service Vaughan will be essential. Driving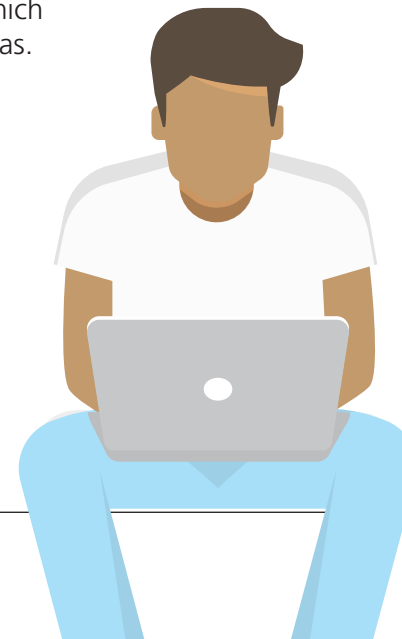 channel shift, so citizens can get information and carry out transactions online means that fewer citizens will need to call the City. In turn this will release Access Vaughan staff to take on new services from back office staff. This will further reduce the pressure on back office services, releasing them to work on higher value activities. This is a virtuous cycle of business improvement which can be applied across the City's service areas.

Responsibility for delivering the program should be with the Digital and Customer Experience Program Manager. Individual project teams (both directly part of the program and outside of the program) will be responsible for delivering projects and initiatives.

5.3.2 Define Digital Decision Making Groups

Coordination of decision making, policies and standards is critical if the City is to offer consistent services to its customers.

Thus a range of groups that involve various stakeholders is recommended.

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T³ Technology Transformation Team

Mayor and Members of Council

Digital Cooperative

Business Relationship Manager

Business Requests

Digital Transformation + CX Manager

Jurisdictional Scans + Task Force(s)

Council / CMT / SMT

Project Teams

Business Plans

Working Groups + Power User Groups

Digital Ambassadors {Internal}

Digital Ambassadors {External}

Legend

Mayor and Members of Council

Governance

Team/Individual

Virtual Team

Reporting

Informing

Process

5.3.2 Define Digital Decision Making Groups

The following groups and roles will be involved in governing and delivering the digital strategy and digital related projects.

Mayor and Members of Council

Role: Approves budget and endorses strategies + recommendations from T3.

Membership: Council

T3 Technology Transformation Team

Role: Endorses strategies; Approves recommendations for technology and digital projects from Digital Cooperative; Allocates capital and operating budgets for projects.

Membership: Corporate Management Team (CMT)

| Mayor and Members of Council |
| Governance |
| Team/Individual |
| Virtual Team |

Digital Cooperative

Role: Oversees delivery of Digital projects and strategies; Defines policy and standards; Identifies and recommends priorities; Evangelizes digital, corporate strategies and standards.

Recommendations: Escalates points of disagreement to T3

Membership: SMT + Management: Communications, Digital Services, Service Vaughan, Strategic Initiatives, Business Units, Vaughan Public Libraries

Digital Transformation and Customer Experience (DT + CX) Manager

Role: Owns the Digital Citizen Experience (CX); Leads Digital Transformation Program; Leads the development of and recommends draft policy, standards related to Digital Program and experience; Works with business units to coordinate delivery of high quality customer experiences; Oversees projects and initiatives.

Recommendations: Recommends strategy, policy and standards to Digital Cooperative, T3 and CIO

Membership: Digital Transformation and CX Manager

Project Teams

Role: Delivers projects that are delivered from within the Digital Program or that are being delivered as business-technology initiatives

Recommendations: Status reporting to DT+CX Manager, Digital Cooperative and T3 through project portfolio reporting; Escalation to Digital Cooperative / T3

Membership: Service owner; Business leads; SME's; Digital Services; Supporting team members

Jurisdictional Scans + Task Force(s)

Role: Developing in-house knowledge to prepare for and recommend implementation of Smart City technologies, IoT, network, data, privacy standards. Responsible for delivering projects recommended by the Smart City Taskforce and endorsed/approved by Council and T3.

Recommendations: Standards and recommendations to DT+CX Manager and T3.

Membership: OCIO; Transformation & Strategy; Purchasing; Legal; Public Works

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Working Groups + Power User Groups

Role: Forum for communicating standards and best practices to departmental practitioners; Focused on content development and digital service delivery

Recommendations: Suggestions from this group carried to Digital Council

Membership: Digital Services; Communications; Digital Ambassadors; Business leads

Digital Ambassadors

Role: {Internal} Front line, engaged staff who will lead on content creation and Citizen Experience management. Ambassador's evangelize digital capabilities and assist their teams in implementing digital solutions to business problems. They work closely with the Digital Program leads to socialize and introduce capabilities to their teams. {External} Engaged citizens that test, veryify and inform needs, solutions, services and service experiences with the City.

**Recommendations:** Feedback through Digital Platforms

Membership: Open Call (by application)

A note about Internal Digital Ambassadors:
To date the City has adopted a heavily distributed web content approach, resulting in over 200 contributors to the website. This makes it difficult for the City to coordinate the group and provide consistent web content that meets best practice standards.

Moving forward, the City will reduce the number of people involved in web content management across the organization (from 200 to around 50 to give an indication of the scope) - these 50 people will become Digital Ambassadors. Ambassador's evangelize digital capabilities and assist their teams in implementing digital solutions to business problems. They work closely with the Digital Team to socialize and introduce capabilities to their teams. They coordinate web content updates and ensure standards are being met. They participate in an online community of practice that shares ideas, information about new services and best practices.
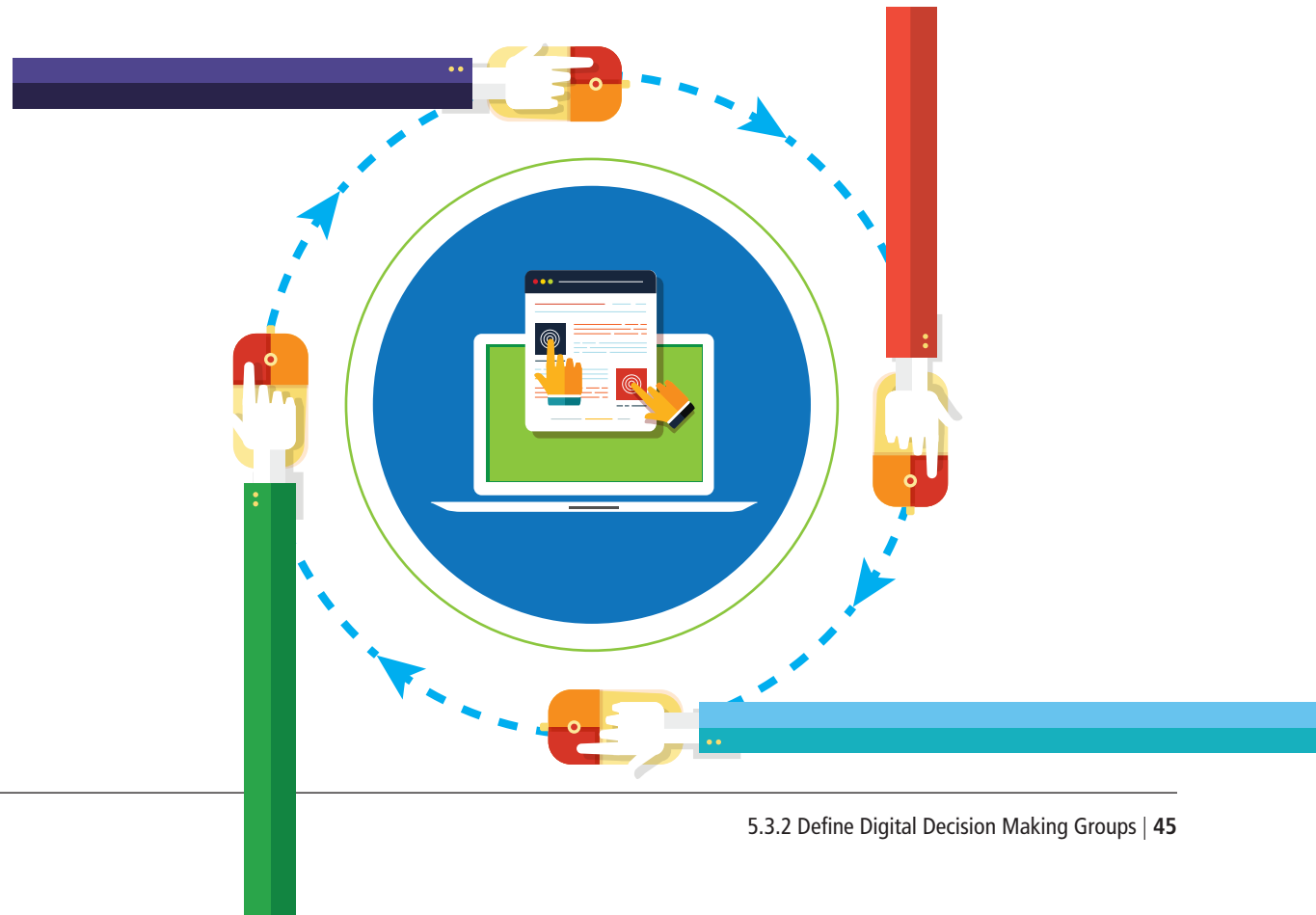
5.3.4 Set Policy and Standards

The digital strategy should establish policy, standards and guidelines to help coordinate and align the program and to help decision makers.

Policy: Provides management direction. What do I need to do and and why?

Standards: Provides principles, rules, minimum acceptable level. What is required?

Guidelines: Provides advice, suggestions and recommendations. Helpful information to guide decisions and implementation.

The digital strategy may be supported by an overarching digital policy that formally states the leadership role that the OCIO has for digital, the roles of all partners, and that outlines what should be done (who should be involved, how decisions should be made) when considering or designing a new digital service (website, microsite, service, app, etc).

Standards should be defined to set out how digital services should be developed and delivered. This may include;

- Overriding digital principles
- The process of designing and commissioning a service - roles and responsibilities, processes, tools and techniques
- Base requirements for all digital services - e.g. branding, accessibility standards
- Coding standards
- Security standards
- Data and privacy standards

Guidelines should be developed to provide playbooks to those that are involved in developing digital services. These playbooks will be in the form of guidelines, checklists, and supporting material. Areas covered may include:

- Digital practices
- Brand / design standards
- Content management standards
- Service design standards
- Customer journey mapping guidebook
- Best practices for building secure digital services

Collectively this material should capture the essence of how the City will plan, develop, deploy and operate new digital services. The UK's Government Digital Service Service Manual is a comprehensive and high quality example that the City can model its own policy, standards and guidelines after.

Where initiatives fail to follow the policy or don't meet the standards, the exception should be recorded by OCIO and escalated to the Digital Cooperative and SMT if required. The OCIO will use its discretion to determine which escalation route will be most effective.

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5.4 Establish Suitable Program Resources

To lead the development of digital services, the City needs to grow its digital capability and capacity. A series of recommendations are made in this area:

5.4.1 Secure a Digital Partner

There are immediate projects that the City can begin to work on, but internal resources currently lack the skills, and are already committed to other key projects (e.g. CRM, Office365, eScribe).

In the interim it is recommended that the City engage with an experienced digital partner that can assist the City with a) delivering projects, and b) helping the digital team learn more about digital techniques and approaches and thus understanding better what its needs are (and why that's important).

The partner should have experience in:

- Developing proven digital services in the public sector
- User research
- Service design
- UX / design
- Development - Agile development / Open source

The City should select a partner on a Vendor of Record (an Agency of Record) basis for a defined time period, this way as and when project requirements are identified the partner

can be engaged to support project delivery. A funding allocation for services from the partner should be identified within the Digital Services budget.
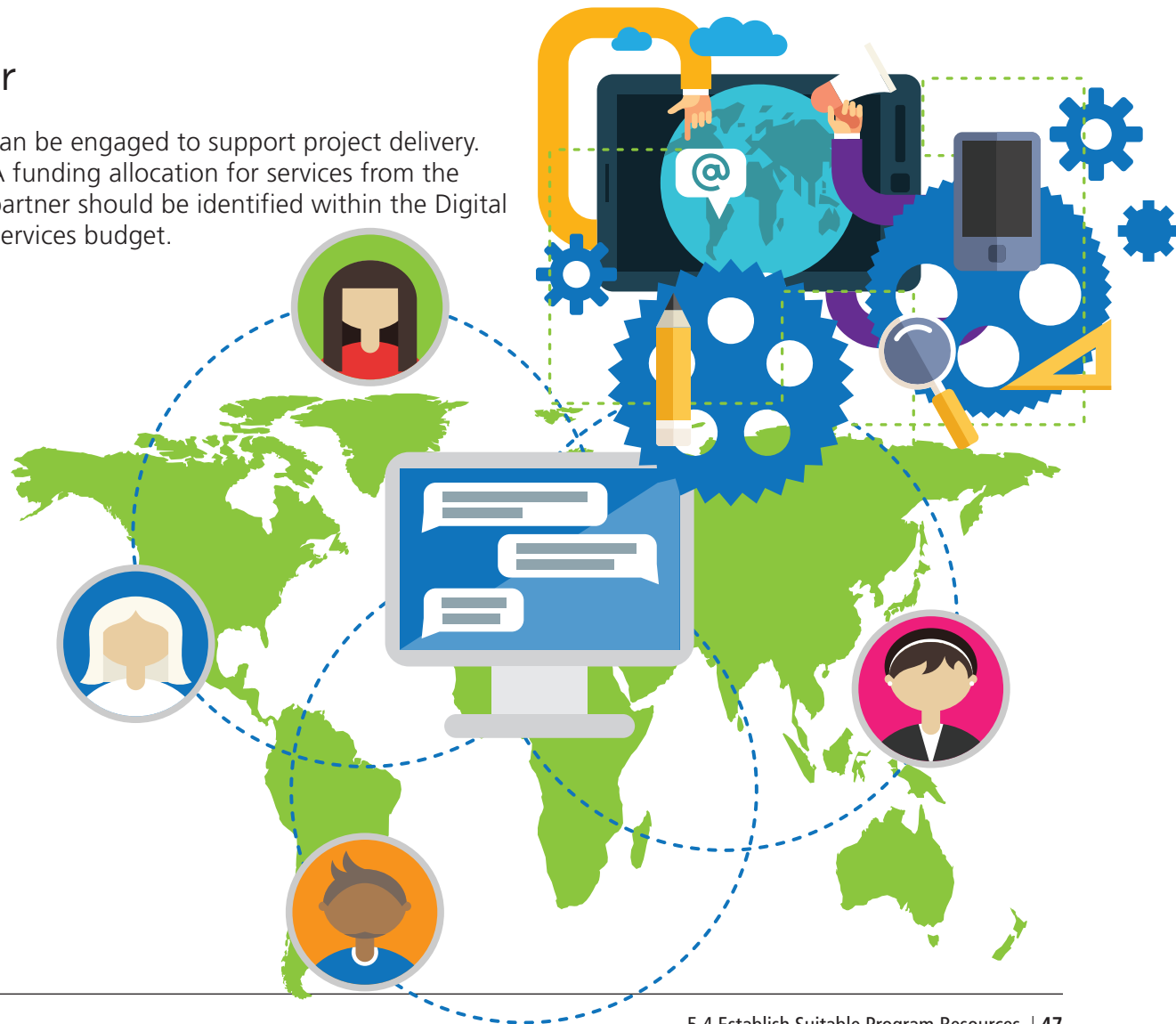
5.4.2 Build an internal Digital Services Team

The 'Digital Services Team' should be a virtual group of people that involves the Digital Program Manager, the Digital Services Division in OCIO, Corporate Communications, and a variety of stakeholders throughout the organization that are involved in conceiving, designing and delivering digital services. This group comes together formally through the governance framework as the Digital Cooperative, and informally with a broader membership as the Digital Services Team.

The mandate for the Digital Services Team is to support the Digital Program Leader in:

- Providing better services to connected customers
- Providing corporate digital leadership
- Setting standards for the use of digital (websites, social, digital communications, apps)
- Educating colleagues about the use of digital tools and techniques
- Being open and transparent (develop in the open, use open source technologies)
- Being agile, iterative and data driven

Collectively this group should be responsible for City branding and style guidelines and bringing design thinking into the City's approach

The previously named Vaughan Online Team has been retitled by OCIO to Digital Services Division. This group is responsible for working with the Digital Program Manager, the rest of the Digital Team and stakeholders to execute digital initiatives at the City.

The current Digital Services Division has a broad set of responsibilities that extend to include SharePoint, Office365, eScribe and CRM support. This is a heavy load for the team. Moreover, the digital skills within this team have been focused upon Microsoft technologies and less in the areas that a typical digital group would possess (user research, design thinking, open source, open development styles).

The GDS service in the UK defines the members of a digital service delivery team. Large organizations (the Ontario government for example) might dedicate individuals or more than one individual to each role, often on a per project basis. Doing so would create untenable resource demands upon the City.

Although the City cannot follow this lead, each of these positions has important skills to bring and roles to play in digital service design and digital projects. The table also identifies where existing positions within OCIO can fill needs, and where some key gaps must be filled through the addition of resources.

ROLE	CURRENT
Service Owner/Manager	Business Lead / Owner
Product Management	No Product Management
User Researcher	No User Researcher
Designer	No in-house Designer (design carried out by developers)
Content Development	Distributed content development
Developer	2 x Developers focused on existing solutions and SharePoint environment
Data Management	Existing IT Staff dedicated to data management
Infrastructure	Existing IT Staff dedicated to Infrastructure Management
QA	No Dedicated QA Staff
Customer Support	Digital Team / Business Leads / Business Subject Matter Experts

FUTURE STAFFING NEEDS	
✓	Existing Business Leadership
○	1 x Digital and Customer Experience (CX) Program Manager
○	1-2 x User Researchers
○	1-2 x Designers
○	2 x Content Developers
○	2 x Developers
✓	Existing IT Staff (data management)
✓	Existing IT Staff (Infrastructure Team)
✓	Existing Business and Digital Services Staff
✓	Existing Business and Digital Services Staff

In addition to the Digital and CX Program Manager already discussed it is recommended that the City create four new positions within the Digital Team. These four positions are:

1 User Researcher

The user researcher helps understand users of services (not generically, but of a specific service) so that the City can design the right kind of service in the right way. When working on your service, they will:

- plan a programme of research for your service
- develop a clear understanding and empathy for your users
- design, conduct and analyze user research using a range of techniques
- provide guidance on design based on their understanding of your users' needs and behaviour

1 Designer

A designer will help the City create user-focused services and a consistent user experience. This role will focus on interaction, and user experience design.

2 x Developers

A developer will help the City:

- build software with a focus on what users need from your service and how they'll use it
- write, adapt, maintain and support code
- continually improve the service with new tools and techniques
- solve technical problems

We believe that this will create an embryonic digital team with the requisite skills to accelerate progress on the Digital Strategy. As the website project will be the key initial project these positions may initially be funded on a contract basis by the new website project, positions should be converted to permanent positions subsequently.

The City currently operates a co-op program in OCIO. Bringing in talented co-ops to fill some of these emerging roles could be a really good option for the City to consider.

5.4.3 Build Content Specialist Capacity

While the City's home page and some corporate pages are managed by the Corporate Communications division, the current web content management approach at the City is largely a decentralized one. There are over 200 approvers and editors distributed across the City. While some guidelines are provided by Corporate Communications regarding writing for the web, there is no monitoring for compliance. This results in inconsistent, unclear messaging on the website. Distributed content creation model has been shown to not work effectively in organizations that have limited digital maturity and experience - and this appears to be the case at Vaughan.

A more centrally controlled editorial process is recommended to more effectively provide the content and communications that the community needs. Digital teams typically include content specialists with expertise in writing and preparing web content. These specialists should work with business experts to write content for the website. This would mean additional content specialists based in communications.

The Digital Council should define content policies and standards. Content specialists within Communications should provide training for those that are involved in content development in departments. The number of staff involved in content preparation in departments should be significantly reduced.

5.4.4 Resource Projects

Many of the projects identified in the digital strategy are significant undertakings; for example the web revitalization, the CRM project implementation or the open data initiative. Each one of these projects will require project teams to lead their implementation.

At minimum these projects will require:

- A project manager
- A business analyst
- Subject Matter Experts (business units, technology team)
- Digital team members

An area that we believe is ripe for exploration is the use of digital techniques to improve community engagement. Using ideation, forums and online panels, as well as digital town halls represents an opportunity to engage with groups that don't typically participate in City consultation work. This work will be led by Strategic Planning, and supported by the Digital Program.

5.5 Digital Program Approach

The approach to Digital initiatives is different than traditional IT projects that have typically employed the waterfall approach. This approach is characterized by long periods of planning, before execution. Digital initiatives typically are focused on more rapid and iterative implementation of solutions.

The following characteristics and principles should be applied in the Digital Program:

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Start Small Work with Strong

Be Agile Digital Advocate

Data Driven Service Owners

Focus on the User - Customer Centric Services

Simplify, Simplify, Simplify

Be Open, Share Experiences Experiment

Be Bold

For Everyone

Educate

5.5 Digital Program Approach

Focus on the User - Customer Centric Services

In designing and building new services, the focus must be completely on the user's experience. Service owners and designers should be careful not to make assumptions. They should talk to users of the service, understand their needs, the situations in which they would use the service, and any challenges with any current services. Customers should be involved in testing the services through a beta phase. The City will need to develop new skills in user research, service design, UX design and testing to help them improve customer journeys.

Simplify, Simplify, Simplify

On the web if something can go wrong, it usually will. Services should be designed for customers to be simple. This means removing any element of confusion, eliminating repetitive activities, catching errors before they are submitted. The City should do the hard work to redesign back end processes so that services can be made simpler on the front end. In designing services, accepting 'this is how it's always been done' is not an option. Teams should employ the 5 why's and other techniques to challenge existing processes to find better, simpler and more efficient options.

Start Small

Digital projects avoid 'boiling the ocean', focusing instead upon delivering a meaningful solution that can be deployed quickly. This often means building a solution that addresses a part of a business problem. The concept of a Minimal Viable Product (MVP), the smallest possible deliverable that demonstrates the value of a solution, is a common concept in digital that the City should adopt. This involves descoping initiatives, for instance focusing on one specific license type, instead of all licensing processes. Once a small service is deployed, perhaps first as in beta, the City should plan to iteratively improve the service based on usage and user feedback.

Be Agile

Using agile techniques, which iteratively develop solutions and enhance an initial MVP solution is a common approach that the City should adopt for its digital initiatives. Agile involves rapid delivery of working solutions, and this will require staff to learn and be trained upon the new approaches.

Data Driven

We should learn from real world behaviour by looking at how existing services are used. Let data drive decision-making, not hunches or guesswork. Keep doing that after taking your service live, prototyping and testing with users then iterating in response. Analytics should be built-in, always on and easy to read.

For Everyone

Digital Services should be designed for everyone to use. We are building services for the whole City. Services should be accessible, inclusive, easy to read and interact with.

Work with Strong Digital Advocate Service Owners

Designing digital services relies on strong service ownership and empowerment to make the real changes necessary to improve customers experiences. Digital teams must work with Digital Advocates in business units who are willing and able to champion and lead change in their business unit.

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Educate

The Digital Team should develop digital skills across City departments through training programs, informal peer groups, and other methods of sharing the principles, methods, and tools used by the Digital Team.

Be Bold

To achieve transformative outcomes, staff and management need to be willing to be bold, not afraid to fail. They need to be empowered by leadership to try innovative and radical ways of approaching service delivery. Service owners and project teams need to be champions of change, not held back by fear of change.

Experiment

The digital program should encourage experimentation, pushing boundaries and testing new ideas and concepts. There are a number of ways to do this:

- Prototype ideas internally before testing them in the public sphere.

- Work with the library as a digital experimentation lab to test ideas in public that may be less high profile

- Use external partners on projects to test and incubate ideas. For example, use an external consulting firm facilitating the development of the Zoning Bylaw to test out public consultation and digital town hall tools

- Use already available tools to prototype ideas (e.g. Office 365 for public commenting on proposed strategies and policies), before investing in more comprehensive solutions

Be Open, Share Experiences

There should be clear communication from the Digital Team. Blogging, communication and sharing the work that is going on. The learning that each digital initiative gains should be internalized and shared with the Digital Community within the City. Good ideas that are proven to work should be re-used in other business areas. Lessons learned from project failures or disappointing outcomes should be folded into future initiatives. The Digital Cooperative and Working Groups should be the forums in which ideas and lessons learned are shared.

5.6 Digital Service Promotion

As discussed earlier, digital channels are cheaper for the City to operate than traditional channels. While they may not always be suitable for everyone's use, it is in the City's interest to encourage adoption. Thus the City must a) make service users aware and b) encourage service use to use the service in preference to other channels.

A To promote awareness of existing and new services the City may choose to;

- Have service owners promote digital services through existing channels of the new service - e.g. mail out inserts, information printed on envelopes, online service information highlighted on forms, catalogs, guidelines

- Have service owners promote digital services through email / signage / website - e.g. promotion of new services through email signatures, mailing lists, physical signage in City locations, on the website

- Have service owners promote through the offering of guided sessions / training for high volume users of services (e.g. large builders in the City for the introduction of digital plans submission)

- Train staff on using Digital Services so that they can guide service users toward the Digital Service at every opportunity

B To encourage and incentivize the use of Digital services, the City may choose to;

- Price online services lower than offline services (e.g. building permits submitted online are $10 cheaper[10]. This can be particularly effective for encouraging B2B adoption of services where high volumes of transactions deliver significant savings)

- Offer faster service delivery (e.g. reduced waiting times) through applications received via online channels

- Offering early access to services online (e.g. early bookings)

- You may choose to limit or remove access to other service channels in due course (suitable for business to business transactions).

Studying existing patterns of citizen usage of the City's websites and Access Vaughan will help the City pinpoint areas where digital services could drive channel shift.

In addition, the City should listen closely to customers and iteratively improve services. For example, conducting user research with users of a service that don't use the Digital Service will help the City understand their concerns and identify ways improve the service to address the concerns.

The UK government GDS team has some good advice in this area[11].

5.7 Digital Performance Measures

If the City is to prioritize Digital, it must have means to measure its progression and success in the digital domain. Clearly tracking the implementation of the recommendations contained within this strategy, and the projects recommended will be one key measure for tracking progress.

RBA model reporting on the delivery of the Digital project portfolio will be provided to the Digital Cooperative and Technology Transformation Team on a monthly basis. An annual update to Council will be provided.

Another simple step is to make website analytics more widely available and easy to use for digital and non-digital teams. By doing so, decisions can be made based on data, rather than assumptions or personal preferences.

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10 City of London offers this option to users of its online building permitting service. The justification is that the submission electronically is saving the City time and therefore cost. A portion of the savings are passed on to the service user.
11 https://www.gov.uk/service-manual/helping-people-to-use-your-service/encouraging-people-to-use-your-digital-service

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The example illustrates a simple, single page dashboard that provides information about the use of the City of Philadelphia's web properties.

Looking more broadly, the following section identifies a set of measures that should be developed into a Digital Dashboard to provide the Technology Transformation Team, Digital Cooperative, SMT and Council visibility into digital strategy progress. Simply put the City's digital strategy aims to offer more digital services and for those services that it offers to be used more.

For each of these measures comparisons should identify year over year, month over month and trends against targets.

Website usage

- Usage - visits / time on site / high volume sites / device usage / location
- Usage - demographics (gather via regular survey)
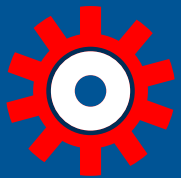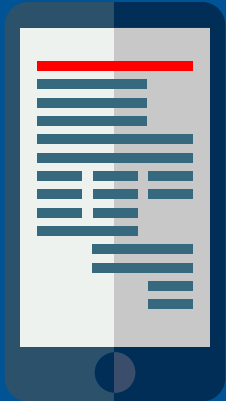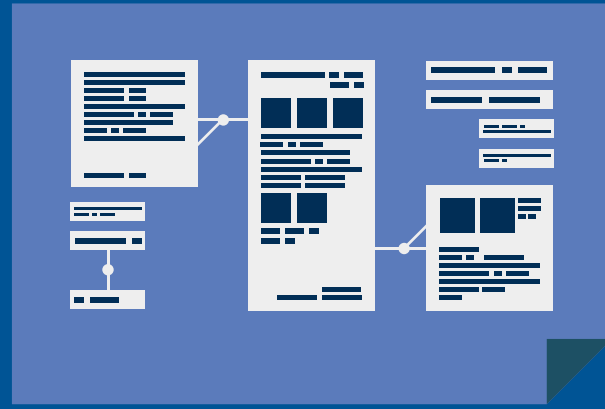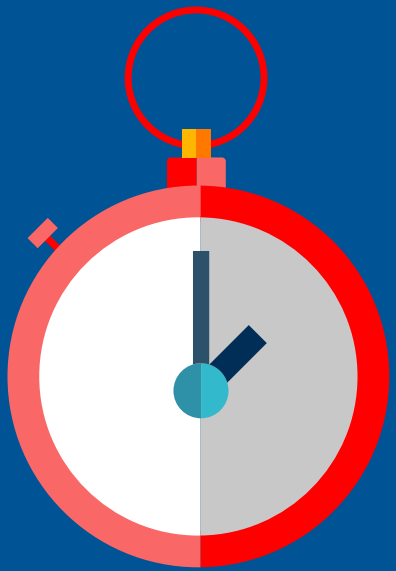- Usage - user satisfaction (gathered following receipt of service)

Social

- Follows
- Shares
- Views
- Engagements

Individual digital services (usage targets should be set and reported upon)

For each digital service as part of implementation the City should establish mechanisms to track:

- **Take up** - the proportion of service users that are using the service in comparison to other channels (e.g. face to face, contact centre)
- **Customer satisfaction** - the satisfaction of users of the service (provide ability to provide a rating and feedback)

- **Completion rate** - the number of transactions that are started and completed online (e.g. identifying the number of transactions that are abandoned part way through)
- **Cost per transaction** - the City should benchmark the overall cost per transaction prior to launching a digital service, then track on an ongoing basis the transaction costs

For the Digital Strategy as a whole

- Develop a single Digital Service Performance Number (DSPN) by identifying the top 50 City transactions by volume. Identify the proportion of transactions conducted online and offline for these top 50 transactions. Identify the proportion of transactions carried out online to provide a number as a percentage. Set stretch targets for the DSPN measure year by year, and report regularly to Technology Transformation Team, Digital Cooperative, SMT and Council.
- Report on total revenue accepted electronically vs. offline (check / counter service)

Other

- Digital standards set / developed
- Digital exceptions (solutions not meeting set standards)
- Digital training sessions

6.0 Implementation Plan

6.1 Initiatives

The Digital Strategy Implementation Plan outlines key initiatives, proposed and planned, as part of the Digital Strategy and aligns with the recommendations from the GIS, Data, IT and Mobile + Productivity strategies.

Implementation of the initiatives in the proposed time frame, or at all, is dependent upon prioritization, funding and resource allocations from a subsequent facilitated workshop with the City of Vaughan Senior Management Team in Fall 2017. The implementaiton plan will the be further prioritized in 2018 by the T3, Technology Transformation Team and receiving corporate and Council support.

Projects have been flagged as potential quick win projects that may be pursued by the Digital Team to demonstrate immediate value.

During the strategy development process in 2017, 2 projects were implemented, and 14 budgeted for, resources allocated and reflected on the 2018 OCIO workplan.

6.2 Value Proposition

Why should the City invest in Digital? What is the business case?

A number of factors discussed earlier in the report point to drivers for the investment:

- Customer expectations and demand - increasingly digital services will be important to maintain satisfaction with City services
- Competition with neighbouring and leading municipalities - surrounding municipalities are investing in digital
- Aspirations to become a world class City - world class cities are embracing digital as a game changer in municipal service delivery

- Modern service delivery tools and capabilities makes the City a more attractive employer

But, one of the primary reasons for offering and encouraging the adoption of digital is the drive toward lower transaction costs. Significant staff time can be saved through digitization - allowing for reallocation of resources, and cost avoidance related to delaying or negating new hires. Printing, postage and accommodation costs can be reduced. Customer time savings can be significant, printing costs can be reduced and unnecessary trips to City Hall can be eliminated.

So, can we quantify how much the City can save by driving digital services online?

Unfortunately, at this time the City lacks sufficient information regarding service transaction volumes and current channel uptake. This makes it difficult to calculate the savings potential from driving customers towards digital channels, and thus makes building a complete business case impossible.

Looking forward, beginning to gather and track this information is an important aspect to monitoring the City's Digital progress. It has been recommended in this strategy that the Digital and CX Program Manager be responsible for coordinating the collection and reporting this information.

6.3 Moving Forward

This strategy outlines a vision for a future where the City is focused on

making Vaughan better for people in the digital age.

If the City is serious about becoming a World Class city; if it is to deal with growth without adding significant numbers of employees to the City's payroll; if it is to optimize its service delivery and meet the expectations of 21st century citizens; investing in digital is critical.

Resourcing the strategy is essential - without it the City will not be able to move forward the Digital agenda. Without investment in new staff and new skills the City will not have the capacity to lead most of the initiatives identified within the strategy, and they will die on the vine. Good ideas that have clear potential to save hundreds of thousands of dollars for the City will fail to come to fruition.

Investment in a range of core technologies - CRM, identity management, web forms - is also required to establish the framework and capabilities that will enable the City to implement new services with agility and speed.

Finally, without the investment of time and attention from senior levels into governance, controls, policies and standards the singular brand and customer experience that the City is striving for with this strategy will be sacrificed.

This strategy needs Council and leadership support, commitment and investment to be realized; if it cannot be secured, then the focus of the OCIO will be directed elsewhere.

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